

PROCEEDINGS
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SIX NEW SPECIES OF TREES AND SHRUBS FROM
MEXICO.

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Of the six new species described in the present paper, three belong to the genus *Vauquelinia*, of the family Rosaceae, a group essentially Mexican in its distribution, although two of its representatives extend into the southwestern United States. One of the species described was indicated as new some years ago by Mr. J. H. Painter, formerly Aid in the U. S. National Herbarium.

Two of the new species belong to *Odostemon*, for which the later name *Mahonia* is often used, a genus formerly referred to *Berberis*, but now commonly regarded as distinct. The last plant described is a *Deutzia*, of the family Hydrangeaceae, the third species to be reported from America. The genus is well represented in eastern Asia, and some of its species are common in cultivation.

***Vauquelinia potosina* Painter, sp. nov.**

Branchlets tomentulose or finally glabrate; petioles 0.8-2.5 cm. long; leaf blades narrowly oblong, 6-10.5 cm. long; 1-2.2 cm. wide, obtuse or acutish at the base, acutish or obtuse at the apex, closely serrate, glabrous, green and lustrous on the upper surface, slightly paler beneath; corymbs many-flowered, 4-7 cm. broad; calyx glabrous outside or nearly so, the lobes ovate-oval, acutish, tomentose within on the margins; petals broadly oval, 3.5 mm. long; fruit densely tomentose.

Type in the U. S. National Herbarium, no. 570101, collected at Álvarez, San Luis Potosí, Mexico, May, 1905, by Edward Palmer (no. 594). Collected also at Bagre, in the same State, in June, 1911, by C. A. Purpus (no. 5207).

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Related to both *V. corymbosa* Correa and *V. karwinskyi* Maxim. The former differs in its narrow, long-petiolate leaves, whose blades are very acute or attenuate at the base; and the latter is distinguished by its very broad leaves with blades truncate or very obtuse at the base.

Vauquelinia angustifolia Rydb. was published in 1908* as a segregate from *V. corymbosa*. It is said to be distinguished from the latter by its shorter petioles and the presence of pubescence on the interior surface of the hypanthium. Examination of material of both species convinces the present writer that there is no essential difference between them. The length of the petioles exhibits great variation upon a single plant, and the hypanthium is always sericeous within. Material from Hidalgo, the type locality, differs somewhat from the original illustration of *V. corymbosa*, but not essentially, apparently. This species was reported by Rydberg only from Mexico, but there is a specimen in the National Herbarium collected somewhere in western Texas by V. Havard in 1880.

***Vauquelinia australis* Standley, sp. nov.**

Branchlets finely but loosely tomentulose; petioles 5-8 mm. long; leaf blades narrowly elliptic-oblong, 3.5-6 cm. long, 1-1.6 cm. wide, acute or acutish at the base, rounded or very obtuse at the apex and mucronate, finely serrulate, green and lustrous on the upper surface, glabrous or sparsely tomentulose, pale beneath with a fine yellowish tomentum; corymbs many-flowered, 3.5-4 cm. broad, short-pedunculate; calyx sparsely tomentulose outside, the lobes ovate-oval, acutish; petals suborbicular, 3.5 mm. long.

Type in the U. S. National Herbarium, no. 840627, collected on Cerro de Paxtle, vicinity of San Luis Tultitlanapa, Puebla, Mexico, April, 1908, by C. A. Purpus (no. 2729a).

The only other species with a persistent tomentum on the lower surface of the leaves is *V. californica*, but in that the leaves are larger, more narrowed at the apex, on much longer petioles, and with a very fine and dense white tomentum.

***Vauquelinia pauciflora* Standley, sp. nov.**

Tree; branchlets finely and rather loosely tomentulose; petioles 3-6 mm. long; leaf blades narrowly lance-oblong, 3-4 cm. long, 6-11 mm. wide, obtuse or acutish at the base, somewhat narrowed to the acute or acutish apex, finely serrulate, lustrous above, sparsely tomentulose, glabrous beneath when expanded but probably tomentulose when young; corymbs few-flowered (flowers 10 or fewer), nearly sessile, the flowers short-pedicellate; fruit densely tomentose.

Type in the U. S. National Herbarium, no. 234626, collected in Guadalupe Canyon, northeastern Sonora, Mexico, altitude 1380 meters, October 3, 1893, by E. A. Mearns (no. 2535). Obtained at the same locality, Aug. 28, 1893, by E. C. Merton (no. 2063).

* N. Amer. Fl. 22: 260.

Guadalupe Canyon is on the border between Sonora and New Mexico. In the flora of New Mexico* the writer reported this plant from that State as *V. californica* (Torr.) Sarg., upon the basis of Dr. Mearns' published notes. Upon examination of the specimens, however, it is evident that the Sonoran plant is different from that species, which occurs farther west. In *V. californica* the lower surface of the leaves is covered with a fine, close, persistent, white tomentum, the leaves are much larger, the petioles twice as long or longer, and the inflorescence broad and many-flowered.

***Odostemon longipes* Standley, sp. nov.**

Branches dark gray or blackish; leaves 20–30 cm. long, the rachis very slender, somewhat flexuous, glaucescent, the leaflets usually 11 or 13, distant, sessile or the lowest short-petiolate, the upper ones slightly smaller than the lower, the lowest pair borne 4–5.5 cm. from the base of the rachis; leaflets narrowly oblong, lance-oblong, or ovate-oblong, 3.2–5.5 cm. long, 0.8–2 cm. wide, acute or acutish at the base, rounded or obtuse at the apex, mucronulate, entire, subcoriaceous, glabrous, dull, pale green above, glaucescent beneath, the venation prominent and finely reticulate on both surfaces; flowers racemose, the racemes 15–22 cm. long, long-pedunculate, the rachis very slender, the flowers few, remote, the pedicels slender, glaucescent, 1.5–2 cm. long; fruit subpyriform, about 1 cm. long, very glaucous; seeds obovoid, compressed, about 7 mm. long and 3.5 mm. wide, dark brown, dull.

Type in the U. S. National Herbarium, no. 571119, collected at San Ramón, Durango, Mexico, in 1906, by Edward Palmer (no. 103).

Related to *O. chococo* (Schlecht.) † but in that species the pedicels are usually less than half as long, and the leaflets deep green, very lustrous on the upper surface, and with less prominent venation. The present species is a large shrub or small tree, for a section of the bright yellow wood is 7.5 cm. in diameter.

***Odostemon quinquefolius* Standley, sp. nov.**

Large shrub, glabrous throughout; leaves 9–15 cm. long, the rachis stout, the leaflets 5, distant, subequal, sessile, the lowest pair borne 3–4.5 cm. from the base of the rachis; leaflets oblong-ovate to ovate-oval, 3–5.3 cm. long, 1.5–4 cm. wide, rounded or broadly cuneate at the base, obtuse or acutish at the apex, coarsely dentate, with 7–10 large spreading spine-tipped teeth on each side, coriaceous, green, lustrous, the venation prominent and finely reticulate on both surfaces; inflorescence racemose, the racemes 7–11 cm. long, long-pedunculate, densely many-flowered, the rachis stout, the pedicels 2–5 mm. long, furnished with 2 small bractlets near the middle, the bracts small, ovate-acuminate; outer sepals small, oval, acute, the inner ones oval, obtuse; stamens bidentate.

Type in the U. S. National Herbarium, no. 841065, collected on the

* Contr. U. S. Nat. Herb. 19: 321. 1915.

† *Berberis chococo* Schlecht. Bot. Zeit. 12: 652. 1854.

Cerro Matize, vicinity of San Luis Tultitlanapa, Puebla, Mexico, July, 1907, by C. A. Purpus (no. 2775).

Purpus's no. 2774, from the Cerro de Paxtle, in the same region, also appears to be of this species, differing only in the somewhat larger leaflets with broader apices.

In Fedde's monograph of the genus *Mahonia** this plant would fall near *M. andrieuxii* (Hook. & Arn.) Fedde, a species in which the leaflets have numerous small appressed teeth. *Odoestemon quinquefolius* seems to belong rather with *M. zimapanana* and the related species, all of which, however, have more numerous leaflets.

***Deutzia occidentalis* Standley, sp. nov.**

Shrub, sometimes 4.5 meters high; branchlets brownish, finely stellate-pubescent; petioles 2.5-7 mm. long; leaf blades lanceolate or ovate, 2-4.5 cm. long, 0.8-2 cm. wide, rounded or obtuse at the base, narrowed to the acute or obtuse apex, green on the upper surface, very rough with fine stellate hairs, grayish-white or yellowish-white beneath, with a dense covering of loose stellate hairs, some of the hairs sessile and some stipitate, the margins of the blades finely and unequally dentate, the venation impressed on the upper surface but prominent beneath; corymbs many-flowered, 2.5-5 cm. wide, the flowers mostly slender-pedicellate; calyx densely stellate-pubescent, the lobes ovate-oval, 1.5-2 mm. long, obtuse or acutish; petals 3-4 mm. long; stamens 12-15, the filaments slender, entire.

Type in the U. S. National Herbarium, no. 841336, collected in the Barranca del Oro, Puebla, Mexico, altitude 2100 to 2400 meters, August, 1909, by C. A. Purpus (no. 3970).

Additional specimens examined: Cerro de Gachupín, Puebla, *Purpus* 3924. Sierra de San Felipe, Oaxaca, alt. 900 meters, *Pringle* 4691. Near Reyes, Oaxaca, alt. 200 to 300 meters, *Nelson* 1810.

The last collection cited may represent a different species, for the leaves are much larger and broader than in the other specimens cited.

Two other species of *Deutzia* have been described from Mexico, *D. mexicana* Hemsl. and *D. pringlei* Schneid. Most of the representatives of the genus occur in eastern Asia, and for the American ones Small† proposed a new genus, *Neodeutzia*. The separation is based upon the fact that the Mexican specimens have slender entire filaments, rather than broad bidentate ones. Since the latter character is not constant in the Asiatic species, it seems better to refer the American plants, also, to *Deutzia*. *Neodeutzia ovalis* Small‡ is a synonym of *Deutzia pringlei* Schneid§, both having been described from the same collection.

The two earlier Mexican species of *Deutzia* differ from *D. occidentalis* in the very fine, close pubescence of the lower surface of the leaves, this composed of similar rather than unequal hairs.

* Bot. Jahrb. Engler 31: 30-133. 1901.

† N. Amer. Fl. 22: 161. 1905.

‡ N. Amer. Fl. 22: 162. 1905.

§ Mitt. Deutsch. Dendr. Ges. 1904: 186. 1904.